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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,658	12/21/2001	Kunijuki Kajita	L9289.01227	2181

24257 7590 09/06/2005

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EXAMINER

CHAUDRY, MUJTABA M

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,658

Applicant(s)

KAJITA, KUNIJUKI

Examiner

Mujtaba K. Chaudry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledge of foreign priority is acknowledged under 35 U.S.C. 119(a)-(d), but not granted because papers are not submitted to the office as stated in previous office actions.

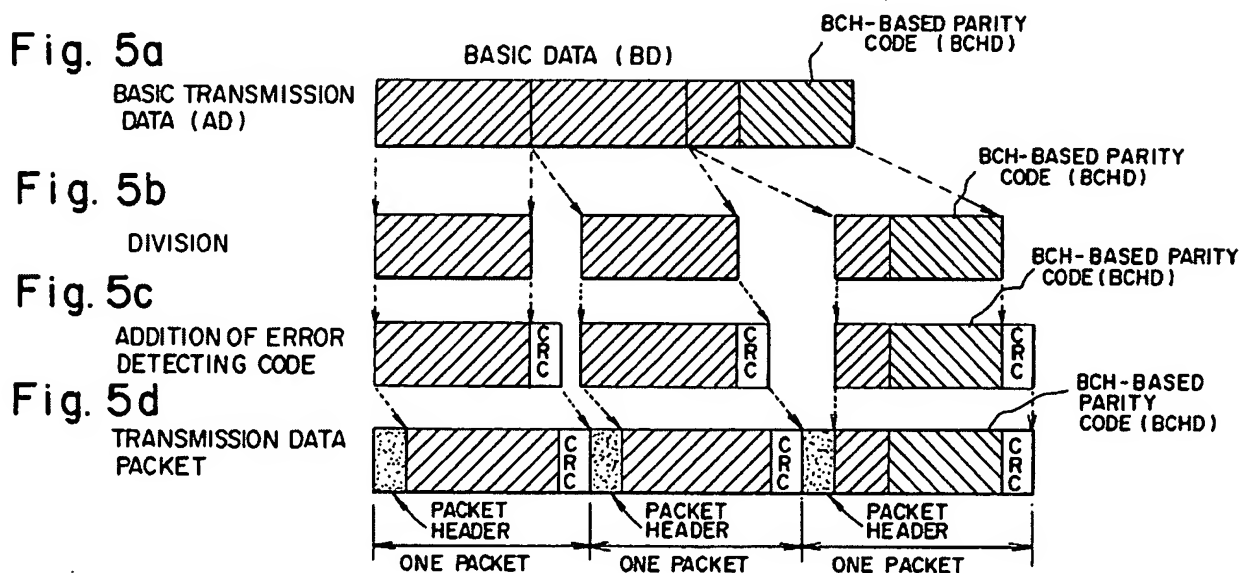
Response to Amendment

Applicant's arguments/amendments with respect to amended claims 34-36 and 46-48 and previously presented claims 37-45 and 49-51 filed August 1, 2005 have been fully considered but are not persuasive. The Examiner would like to point out that this action is made final (See MPEP 706.07a).

Applicant contends, "...the prior art of record, Kato does not teach or suggest at least one of the code blocks comprising a plurality of transport blocks..." The Examiner respectfully disagrees. Upon further reviewing the claims of the present application and the Kato reference, the Examiner notes that the Applicant defines (specification, page 1, lines 22-23) "transport block" *as a unit just before division of data* and a "code block" *as a unit that was connected after each transport block and further being divided* (Specification, page 1, lines 23-25). First off, the definition provided by the Applicant is vague. A unit could be a set of bit or a bit, for example. However, the Examiner interprets a "unit" as being one or more bits. With this being in mind, one can understand the CRC is calculated on a plurality of bits, hence, CRC is code blocks have to have more than one "transport block" according to the Applicant's definition. The "Basic data" of Kato is analogous to the "transport blocks" of the present application as is

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defined. The Examiner notices that the objective of the present application is (Specification, page 4, lines 1-14) to provide a coding apparatus such that the CRC-bit exists at the end of each code block and the length of the code block is an integer multiple of the transport block and thereby ensuring that the CRC-bit is at the end of the code block. Kato reference teaches (Figure 5d, for example) to transmit code blocks such that the CRC is last bit thereof. Furthermore, the Examiner would like to reiterate that Kato teaches (col. 3, lines 9-14, for example) that each transmitted packet/code block is ensured to have the same length.



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The Examiner disagrees with the Applicant and maintains rejections with respect to amended claims 34-36 and 46-48 and previously presented claims 37-45 and 49-51. All arguments have been considered. It is the Examiner's conclusion that amended claims 34-36 and 46-48 and previously presented claims 37-45 and 49-51 are not patentably distinct or non-obvious over the prior art of record. See office action:

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 34-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (USPN 5844918).

As per claims 34-36 and 46-48, Kato substantially teaches (title and abstract) an error correcting code including basic data and a BCH-based parity code appended thereto is divided into smaller packets. An error detecting code is appended to each of the thus-divided packets, so that transmission basic data is formed. When the transmission basic data is received, the basic data and a BCH-based parity code are derived from the transmission basic data. Error correcting is carried out with respect to the overall transmission basic data. An error detecting operation is carried out with respect to each packet using the error detecting code. If a packet is found to

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contain errors, a request for retransmission of that packet will be sent to the sending side. Kato teaches (col. 16, lines 39-67) a digital transmission method for sending a digital signal comprising: a division step of dividing an error correcting code which includes basic data and a parity code, into smaller data segments; an error detecting code addition step of appending an error detecting code to each of the data segments divided in the division step; a transmission step of sending the data segments complete with the error detecting code on a packet-by-packet basis; and a retransmission step of retransmitting a requested data packet in response to a retransmission request of the data packet from a receiving side. This procedure is shown by example in Figure 5, wherein the input terminal 10 of the data transmitter A receives the basic transmission data AD (see FIG. 5A), and the received basic transmission data is sent to the packet assembly circuit 12. The basic transmission data AD has already been changed to a BCH code by addition of a BCH-based parity code to the basic data BD as a result of the FEC operation. The basic transmission data AD is divided into data segments by the segmentation circuit 14 of the packet assembly circuit 12 so that they can be assembled into packets, as shown in FIG. 5b. The error detecting code addition circuit 16 appends the CRC code to each data segment, as shown in FIG. 5c. The header addition circuit 20 appends a packet header to the data segment complete with the error detecting code, whereby a transmission data packet is assembled, as shown in FIG. 5d. The thus-assembled transmission data packet is stored in the data memory 22 and sent to the data receiver B via the transmit/receive circuit 24.

Kato does not explicitly teach a concatenating unit that concatenates each of the data blocks having the CRC as stated in the present application.

However, the Examiner would like to point out that Kato teaches in Figure 5B to divide the basic data, which is analogous to transport blocks of the present application. CRC is then appended to each of the data blocks. Although Kato does not explicitly teach to concatenate all of the CRC data blocks, he does show a data memory (Figure 4, Reference #44), which is used to store the transmitted packets in case of a request for retransmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a concatenating unit to concatenate the CRC data blocks. This modification would have been obvious to one of ordinary skill in the art because one of ordinary skill in the art would have recognized that by using a concatenating unit to concatenate the CRC data blocks would improve on packet synchronization during transmission.

As per claims 37-39 and 49-51, Kato substantially teaches, in view of above rejections, (Figure 5 and col. 9, lines 10-37) the input terminal 10 of the data transmitter A receives the basic transmission data AD (see FIG. 5A), and the thus-received basic transmission data is sent to the packet assembly circuit 12. The basic transmission data AD has already been changed to a BCH code by addition of a BCH-based parity code to the basic data BD as a result of the FEC operation. The basic transmission data AD is divided into data segments by the segmentation circuit 14 of the packet assembly circuit 12 so that they can be assembled into packets, as shown in FIG. 5b. The error detecting code addition circuit 16 appends the CRC code to each data segment, as shown in FIG. 5c. The header addition circuit 20 appends a packet header to the data segment complete with the error detecting code, whereby a transmission data packet is assembled, as shown in FIG. 5d. The Examiner would like to point out that at least one of the segmented data blocks in Figure 5D has less data than the other data blocks. Subsequently, the

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assembled transmission data packet is stored in the data memory 22 and sent to the data receiver B via the transmit/receive circuit 24. Kato also teaches (col. 16, lines 53-68) a digital transmission method for sending a digital signal, comprising: a division step of dividing an error correcting code which includes basic data and a parity code, into smaller data segments; an error detecting code addition step of appending an error detecting code to each of the data segments divided in the division step; a transmission step of sending the data segments complete with the error detecting code on a packet-by-packet basis; and a retransmission step of retransmitting a requested data packet in response to a retransmission request of the data packet from a receiving side.

As per claims 40-45, Kato substantially teaches, in view of above rejections, (Figure 4) the system and method digital data transmission to be for a communications system which obviously encompasses a mobile station and a base station.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

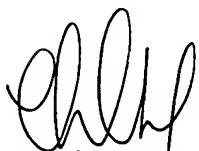
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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

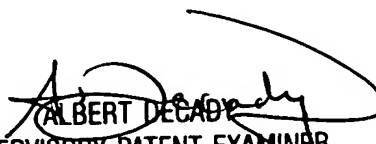
Any inquiries concerning this communication should be directed to the examiner, Mujtaba Chaudry who may be reached at 571-272-3817. The examiner may normally be reached Mon – Thur 6:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Albert DeCady at 571-272-3819.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mujtaba Chaudry
Art Unit 2133
August 24, 2005



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